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| 10/630,546 | 07/29/2003 | George Zguris | 3533-66350 | 7494 |

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EXAMINER

BLACKWELL RUDASIL, GWENDOLYN A

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| ART UNIT | PAPER NUMBER |
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1775

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,546

Applicant(s)

ZGURIS ET AL.

Examiner

Gwendolyn Blackwell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 22-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-21 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/03, 3/04, 10/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: IDS 11/04.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-21, drawn to the glass composition, classified in class 501, subclass 55.
 - II. Claims 22-24, drawn to a battery separator, classified in class 429, subclass 247.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, the invention of Group I has separate utility such as for a glass fiber for use in an optical amplification device. See MPEP § 806.05(d).
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Lisa Caldwell on August 9, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 22-24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Examiner's Comment

6. Applicant uses the term "silica oxide" in claims 1, 5, 7, and 13. Silica is the abbreviated form of silicon oxide. As silica is silicon oxide it is suggested to remove the oxide to clarify the claim.

Claim Rejections - 35 USC § 102/103

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 7, 9, 13-14, and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over United States Patent no. 3,560,177, De Lajarte et al.

Applicant's claims 7 and 13

Applicant's claim 7 requires a glass composition comprising about 1-15 wt % bismuth oxide and about 54-70 wt% of silica.

Applicant's claim 13 requires a glass fiber comprising about .5-30 wt% bismuth oxide and about 54-70 wt% silica.

Regarding claims 7 and 13

De Lajarte et al disclose a glass fiber composition comprised of 66-73 wt% of silica and 0.2-2 wt% bismuth oxide, (column 2, lines 23-36), meeting the requirements of claims 7, 9, and 13-14.

As the ranges overlap, it would have also been within the skill of one in the art at the time of invention through routine experimentation to choose those portions of the claimed invention and the prior art, which overlap.

Regarding claims 18-21

When the composition recited in the reference is substantially identical to that of the claims, the claimed properties or function are presumed inherent. *MPEP 2112.01*. Because the

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prior art exemplifies the applicant's claimed glass composition, the claimed physical properties relating the density, elemental leach rate, and K_{dis} are inherently present in the prior art. Absent an evidentiary showing to the contrary, the addition of the claimed physical properties to the claim language fails to provide a patentable distinction over the prior art of record.

11. Claims 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent no. 5,817,586, Harada et al.

Applicant's claim 7

The limitations of claim 7 have been set forth above.

Regarding claims 7 and 9-10

Harada et al disclose a glass composition comprised of 30-60 wt% silica and 0-40 wt% of bismuth oxide, (columns 1-2, lines 63-7), meeting the requirements of claims 7 and 9-10.

As the ranges overlap, it would have also been within the skill of one in the art at the time of invention through routine experimentation to choose those portions of the claimed invention and the prior art that overlap.

Regarding claim 8

The glass composition does not contain cobalt oxide, zirconium oxide, or titanium oxide, meeting the requirements of claim 8.

12. Claims 1-12, 4-9, and 11-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over International Patent Application Publication no. 95/09131, WO '131.

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Applicant's claims 1 and 7

Applicant's claim 1 requires a glass composition comprising about 0.5-30 wt% bismuth oxide, about 0.01-5 wt% zinc oxide, and about 54-70 wt% silica.

The limitations of claim 7 have been set forth above.

Regarding claims 1-2, 7, and 9

WO '131 discloses a glass composition, Example 43, that is essentially free from lead and cadmium that is comprised of 53.71 wt % silica, 2.51 wt% zinc oxide, and 0.71 wt% bismuth oxide, (page 18, Example 43), meeting the requirements of claims 1-2, 7, and 9.

Regarding claims 4-6 and 8

Example 43 does not contain titanium oxide, meeting the requirements of claims 4 and 8. The ratio of bismuth oxide and zinc oxide to silica is 0.05846 based upon the wt% in Example 43, meeting the requirements of claim 5. The softening point of the glass should be in the region of 450-600 degrees Celsius, (page 9, paragraph 4), meeting the requirements of claim 6.

Regarding claims 11-12

The glass composition can have the following components in weight percent: 30-70 silica, 1-25 boron oxide, 0-10 alumina, 0-50 bismuth oxide, 0.1-25 cobalt oxide, 0-20 sodium oxide, one or more of 0-15 MgO or CaO, and 0.1-20 zinc oxide, (page 4), meeting the requirements of claim 11. Because the glass composition overlaps the composition of the glass range as exemplified by Applicant the physical property relating to the softening point would be present in the prior art of record, meeting the requirements of claim 12.

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As the ranges overlap, it would have also been within the skill of one in the art at the time of invention through routine experimentation to choose those portions of the claimed invention and the prior art that overlap.

Claim Rejections - 35 USC § 103

13. Claims 13-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent no. 3,537,86, Kosaka et al.

Applicant's claim 13

The limitation of Applicant's claim 13 have been set forth above.

Regarding claims 13-15 and 17

Kosaka et al disclose a low expansion crystalline glass comprised of 50-80 wt% silica, no more than 2.0 wt% bismuth oxide, and no more than 4 wt% zinc oxide, (columns 3-4 , lines 10-20). The weight ratio of bismuth oxide and zinc oxide to silica (at 80 wt% silica) is 0.075. Kosaka et al does not specifically disclose that the glass is used for glass fibers.

While it is not specifically disclosed that the glass is used for glass fibers there is nothing in Kosaka et al teaching or suggesting that the glass composition could not be used for glass fibers. It would have been within the skill of one in the art at the time of invention to use the glass composition of Kosaka et al to make glass fibers in order to obtain glass fibers that have a very low thermal expansion coefficient, an excellent resistance to thermal shock, and high mechanical strength, (column 5, lines 65-69).

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Allowable Subject Matter


14. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record while teaching the general glass fiber composition as set forth in present claim 13, from which claim 16 depends, does not teach or suggest the specific glass fiber composition as set forth in claim 16.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn Blackwell whose telephone number is (571) 272-1533. The examiner can normally be reached on Monday - Thursday, 5:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gwendolyn Blackwell
Examiner

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DEBORAH JONES
SUPERVISORY PATENT EXAMINER